



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,181	09/16/2003	Kang P. Lee	55829-C(45945)	5567

21874 7590 03/22/2007  
EDWARDS & ANGELL, LLP  
P.O. BOX 55874  
BOSTON, MA 02205

EXAMINER
----------

NGUYEN, CAMTU TRAN

ART UNIT	PAPER NUMBER
----------	--------------

3772

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/665,181	<b>Applicant(s)</b> KANG P. LEE	
	<b>Examiner</b> Camtu T. Nguyen	<b>Art Unit</b> 3772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/14/04 &amp; 12/24/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Preliminary Amendment*

This Office Action is in response to applicant's preliminary amendment filed on September 13, 2003. Claim 41 has been amended. Claims 1-54 are pending.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 7, 10-15, 24-29, 31, 38-43, 45, and 52-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Hortota et al (U.S. Patent No. 6,294,194). Horhota et al discloses a method comprising the steps recited in these claims including the step of applying pressure pulses, which has a predetermined frequency and amplitude, to the fluids (column 11 lines 65-67 through column 12 lines 1-65)

Claims 1-3, 5-7, 10-15, 17, 18, 20, 21, 24-29, 31-35, 38-43, 45-49, and 52-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Stipps (U.S. Patent No. 6,470,597). Stipp discloses a method comprising the steps recited in these claims including the step of applying pressure, which has a predetermined frequency and amplitude, to the fluids (column 1 line 65 through column 2 line 14).

Art Unit: 3772

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6, 8, 9, 16, 18-23, 30, 32-37, 44, and 47-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hortota et al (U.S. Patent No. 6,294,194). Horhota et al discloses a method comprising the steps recited in these claims but does not expressly disclose the ranges of both the frequency and the amplitude of pressure pulses. However, it would have been obvious to one skilled the art during the time of the invention to optimize the most effective variables of the Hortota et al method to achieve optimal results. Therefore it would have been obvious to one skilled in the art to modify the Hortota et al's method by utilizing the specific ranges of both the frequency and the amplitude of pressure pulses. *See In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980).*

Claims 4, 8, 9, 16, 19, 22, 23, 30, 36, 37, 44, 50, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stipps (U.S. Patent No. 6,470,597). Stipps discloses a method comprising the steps recited in these claims but does not expressly disclose the ranges of both the frequency and the amplitude of pressure pulses. However, it would have been obvious to one skilled the art during the time of the invention to optimize the most effective variables of the Hortota et al method to achieve optimal results. Therefore it would have been obvious to one skilled in the art to modify the Stipps's method by utilizing the specific ranges of both the

Art Unit: 3772

frequency and the amplitude of pressure pulses. *See In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980).*

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Camtu T. Nguyen whose telephone number is 571-272-4799. The examiner can normally be reached on (M-F) 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on 571-272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Camtu Nguyen  
March 18, 2007

  
PATRICIA BIANCO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700

3/19/07